

09/776,278

P-3724-2-F1-C1-C1

IN THE SPECIFICATION

Please replace the paragraph beginning at page 24, line 5, with the following rewritten paragraph:

A) Moreover, in alternative embodiments, the outer cover layer formulation may also comprise a soft, low modulus, non-ionomeric thermoplastic elastomer having a flex modulus in a range of about 1,000 to about 30,000 psi, including a polyester polyurethane such as B.F. Goodrich Company's Estane[®] polyester polyurethane X-4517. According to B.F. Goodrich, Estane[®] X-4517 has the following properties:

REMARKS

Reconsideration and entry of the amendment are respectfully requested. Claims 1 to 8 are currently pending, and no claims have been amended.

The Office Action mailed December 17, 2001 addressed Claims 1 to 8. Claims 2 and 4 to 8 were rejected, and claims 1 and 3 were allowed. Applicant notes the allowance with appreciation.

The specification was objected to by the Examiner as failing to provide proper antecedent basis for the claimed subject matter, and correction was required. The Examiner stated that in claim 7, an outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi is not in the specification.

The specification has been amended to state that the outer cover layer preferably comprises "a soft, low modulus non-ionomeric thermoplastic elastomer having a flex modulus in a range of about 1,000 to about 30,000 psi,...". Support for this amendment may be found in original claim 6 of a parent application, U.S. Patent Application Serial No. 08/556,237, filed on November 9, 1995. Original claim 6 (initially mislabeled as claim 8 in the specification) specifies that the outer cover layer has a flex modulus in a range of about 1,000 to about 30,000 psi. Specifically, claim 6 reads as follows:

[8.] 6. A multi-layer golf ball comprising:
a spherical core;

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an inner cover layer molded over said spherical core to form a spherical intermediate ball, said inner cover layer comprising an ionomeric resin having no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and having a modulus of from about 15,000 to about 70,000 psi;

an outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball, the outer layer comprising a non-ionomeric elastomer selected from the group consisting of polyester elastomer, polyester, polyether polyurethane and polyester amide, said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi. (Emphasis added.)

Applicant therefore respectfully submits that the specification provides proper antecedent basis for the claimed subject matter, therefore Applicant respectfully requests that the objection be reconsidered and withdrawn.

Claims 2 and 4 to 8 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner stated that the Shore D hardness for the outer cover layer is 20 to 40 according to the specification (page 15, line 1).

Applicant respectfully submits that the Shore D hardness for the outer cover layer is not 20 to 40. Applicant respectfully submits that the specification, at page 15, line 1, which is continued from page 14, lines 25 and 26, is describing the Shore D (20 to 40) hardness of a low modulus ionomer suitable for use in the outer layer blend. The Shore D hardness of the outer cover layer, which in claims 2, 4 and 7 is "less than 64" or "64 or less", is supported by the specification. See, for example, the table on page 24, describing Estane® X-4517 as having a Shore D hardness of 39, and Table 9, which shows that the golf balls having an outer cover layer of polyurethane have a Shore C of 65. A Shore C of 65 converts to a Shore D of less than 64, approximately 40 to 50, as shown by both Table 4 on page 14 of GB2276628 and a comparison chart from the Rex Gauge Company (copies attached as Appendix A and Appendix B). Applicant respectfully submits that this overcomes the rejection of claims 2 and 4 to 8

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under 35 U.S.C. § 112, first paragraph. Applicant therefore respectfully requests that the rejection of claims 2 and 4 to 8 be reconsidered and withdrawn.

Attached hereto is a marked-up version of the changes made to the application by this Amendment. The Examiner is invited to telephone Applicant's attorney if it is deemed that a telephone conversation will hasten prosecution of the application.

CONCLUSION

Applicant respectfully requests reconsideration and allowance of each of the presently rejected claims, claims 2 and 4 to 8. Applicant respectfully requests allowance of claims 1 to 8, the claims currently pending.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE SPECIFICATION**

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Moreover, in alternative embodiments, the outer cover layer formulation may also comprise a soft, low modulus, non-ionomeric thermoplastic elastomer having a flex modulus in a range of about 1,000 to about 30,000 psi, including a polyester polyurethane such as B.F. Goodrich Company's Estane® polyester polyurethane X-4517. According to B.F. Goodrich, Estane® X-4517 has the following properties:

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(56) Documents Cited

GB 2264302 A GB 2214515 A

WPI Abstract Accession No 91-026451/04 & JP

2297384A WPI Abstract Accession No 90-144918/19 &
JP 2092378A

(58) Field of Search

UK CL (Edition M) C3M MXC, C3V VEM

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Online databases: WPI

(54) Golf balls

(57) A solid golf ball includes a solid core enclosed in a cover. The resin component of the cover consists of 30 to 100% by weight of an ethylene-methacrylic acid-acrylate terpolymer ionomer resin having a flexural modulus of 2,600 - 14,000 psi and a Shore D hardness of 20 - 59 and 70 to 0% by weight of an ethylene-(meth)acrylic acid copolymer ionomer resin having a flexural modulus of 20,000 - 30,000 psi and a Shore D hardness of 56 - 64. The core is made of a rubber composition comprising 100 parts by weight of a base rubber and 0.2 - 1.5 parts by weight of pentachlorothiophenol and/or metal salt thereof and has a distortion of 2.3 - 3.3 mm under a load of 100 kg. The ball is excellent in spin receptivity, burring resistance, and repulsion.

GB 2 276 628

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Table 4 (Contd.)

| | Examples | | | | | | | Comparative Examples | | | | | |
|------------------------|-------------------|-------|-------|-------------------|-------------------|-------|-------------------|----------------------|-------------------|-------|-------------------|-------------------|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 | 4 | 5 | |
| Ball properties | | | | | | | | | | | | | |
| Weight (g) | 45.2 | 45.2 | 45.2 | 45.2 | 45.2 | 45.2 | 45.2 | 45.2 | 45.2 | 45.2 | 45.2 | 45.2 | |
| Surface hardness | Shore C | | 82 | | 79 | 76 | | | | | | | |
| | Shore D | | 60 | 57 | 49 | 55 | 53 | 51 | 58 | 59 | 58 | 53 | 61 |
| Distortion (mm) | 2.39 | 2.43 | 2.57 | 2.47 | 2.44 | 2.52 | 2.40 | 2.37 | 2.38 | 2.40 | 2.30 | 2.36 | |
| Initial speed (m/sec.) | 77.09 | 76.83 | 76.57 | 76.81 | 76.59 | 76.62 | 76.80 | 77.22 | 77.26 | 76.10 | 77.15 | 77.01 | |
| Burling test | | | | | | | | | | | | | |
| Eagle PW | ○ _{or} Δ | ○ | ○ | ○ _{or} Δ | ○ _{or} Δ | ○ | ○ _{or} Δ | X _{or} Δ | Δ | X | X | Δ | |
| Restar, HT305 PW | ○ _{or} Δ | ○ | ○ | ○ _{or} Δ | ○ | ○ | ○ | ○ | X _{or} Δ | Δ | X | X | Δ |
| MSX PW | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Δ | Δ | Δ _{or} X | Δ _{or} X | Δ |

Appendix B

Comparison Chart *This chart is for comparison purposes only. This is not and cannot be used as a conversion chart.*

| | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|-----|
| A | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| B | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| C | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| D | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| DO | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| O | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| OO | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| M | 30 | 40 | 50 | 60 | 70 | 80 | 90 | | | |

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